

From: [Brian Collins](#)
To: [Moore, Gary](#)
Subject: Hydroblasting with 3D Option
Date: Wednesday, May 13, 2015 12:40:56 PM

Gary,

If we were to utilize the 3D to clean the AST's at the facility this is what we would be looking at.

1. Hydro-blaster – 20K - \$650/Day SWSES Owned – If rented, the rate is usually much higher.
2. 3D Nozzle - \$350/Day – Usually needs to be rented from NLB or Hammelman to get a unit that is reliable. SWSES does not currently have a unit in Houston.
3. Personnel Needs – You would need 3 men to run the unit. You need a Supervisor, an Operator, and a Technician.
 - a. Note – You will also need a vacuum truck and Operator to remove the wash water.
 - b. All Personnel must wear hydro-blast appropriate PPE if working in the hot zone.
 - c. The designated pump Operator can not have any other job and must stay with the pump at all times for emergency shut off.
4. The reason that I am advising the use of the 20K unit over the 10K unit is to decrease the volume of water generated from washing. The 20K is going to put out between 15-25 gallons per minute on average based on the nozzle orifice size. I would recommend a larger orifice for this application due to the nature of the cleaning you need done and to minimize the amount of time it will take to adequately clean the tanks. The larger nozzle will generate more water per minute but will clean the tank much faster as the water stream will be bigger and will cover more surface area during each pass.
5. At best, you will need to drop the 3D twice in each tank and each drop will require a 10-15 minute run time to completely hit all surfaces inside the tanks. This will generate roughly 600 gallons of waste water from each tank. This water may be able to be disposed of as oily contact water as the product is already removed from the tanks with the exception of the residual. (This is just a thought)
6. At worst, you would need to have 4 drops per tank with a 10-15 minute run time to adequately clean these tanks. This would result in an output of roughly 1200 gallons of waste water.

I hope this helps with your decision and will gladly provide more information should you need it. Just let me know if there is anything else that I may be of assistance with. Thanks

Brian Collins

Service Center Manager

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